CLAIMS

We Claim:

1.   A method for reducing angiogenesis in a subject, comprising:

    a)   providing:

        i)   a subject comprising tissue that comprises endothelial cells; and

        ii)   at least one nucleotide sequence encoding a protein comprising a protein kinase A catalytic subunit; and

    b)   expressing said nucleotide sequence in said endothelial cells such that angiogenesis by said endothelial cells is reduced.

2.   The method of Claim 1, further comprising step c) detecting a reduction in angiogenesis by said endothelial cells.

3.   The method of Claim 1, wherein said subject is human.

4.   The method of Claim 1, wherein said tissue comprises at least one of ocular tissue, skin tissue, bone tissue, and synovial tissue.

5.   The method of Claim 1, wherein said tissue comprises a tumor.

6.   The method of Claim 5, wherein said tumor is malignant.

7.   The method of Claim 6, wherein said malignant tumor is metastatic.

8.   The method of Claim 1, wherein said subject has a pathological condition associated with angiogenesis in said tissue.

9.   A method for increasing cell apoptosis in a subject, comprising:

 a) providing:

  i) a subject comprising tissue that comprises cells; and

  ii) at least one nucleotide sequence encoding a protein comprising a

   protein kinase A catalytic subunit; and

 b) expressing said nucleotide sequence in said cells such that apoptosis of said

cells is increased.

10.   The method of Claim 9, wherein said subject is human.

11.   The method of Claim 9, wherein said cell is chosen from endothelial cell, vascular

smooth muscle cell, monocyte cell, macrophage cell, benign tumor cell, malignant tumor

cell, fibroblast cell, B cell, T cell, myocyte cell, megakaryocyte cell, eosinophil cell, neurite

cell, and synoviocyte cell.

12.   The method of Claim 9, wherein said subject has a pathological condition chosen

from angiogenesis, restenosis, atherosclerosis, cancer, tumor metastasis, fibrosis,

hemangioma, lymphoma, leukemia, psoriasis, arthritis, autoimmune disease, diabetes,

amyotrophic lateral sclerosis, graft rejection, retinopathy, macular degeneration, and retinal

tearing.

13.   The method of Claim 12, wherein said pathological condition is fibrosis and said

tissue is chosen from heart, lung, and liver.

14.   The method of Claim 12, wherein said pathological condition is an autoimmune

disease chosen from Lupus, Crohn's disease, and multiple sclerosis.

15.   A method for reducing angiogenesis in a subject, comprising:

     a)   providing:

          i)   a subject comprising tissue that comprises endothelial cells; and

          ii)   at least one polypeptide sequence comprising a sequence chosen from at least one of AVSEHQLLHS/D (SEQ ID NO:114) and SVSEIQLMNL (SEQ ID NO:115); and

     b)   treating said endothelial cells with said polypeptide sequence such that angiogenesis by said endothelial cells is reduced.

16.   The method of Claim 15 further comprising step c) detecting a reduction in angiogenesis by said endothelial cells.

17.   A method for increasing cell apoptosis in a subject, comprising:

     a)   providing:

          i)   a subject comprising tissue that comprises cells; and

          ii)   at least one polypeptide sequence comprising a sequence chosen from at least one of AVSEHQLLHS/D (SEQ ID NO:114) and SVSEIQLMNL (SEQ ID NO:115); and

     b)   treating said cells with said polypeptide sequence such that apoptosis of said cells is increased.

18.   The method of Claim 17 further comprising step c) detecting an increase in apoptosis of said cells.

19.   A method for reducing angiogenesis in a subject, comprising:

   a)   providing:

        i)   a subject comprising a tissue that comprises endothelial cells; and

        ii)   at least one agent chosen from pertussis toxin, cholera toxin, G alpha
               i minigene, dominant negative G alpha i, dominant negative G alpha
               12/13, constitutively active G alpha s, anti-CD47 antibody, dominant
               positive Rho (RhoV14), dominant negative Src, and active Csk; and

   b)   treating said endothelial cells with said at least one agent such that
   angiogenesis by said endothelial cells is reduced.

20.   The method of Claim 19, further comprising step c) detecting a reduction in
angiogenesis by said endothelial cells.

21.   A method for increasing cell apoptosis in a subject, comprising:

   a)   providing:

        i)   a subject comprising a tissue that comprises cells; and

        ii)   at least one agent chosen from pertussis toxin, cholera toxin, G alpha
               i minigene, dominant negative G alpha i, dominant negative G alpha
               12/13, constitutively active G alpha s, anti-CD47 antibody, dominant
               positive Rho (RhoV14), dominant negative Src, and active Csk; and

   b)   treating said cells with said at least one agent such that apoptosis of said cells
   is increased.

22.   The method of Claim 21, further comprising step c) detecting an increase in
apoptosis of said cells.

23.   A method for reducing angiogenesis in a subject, comprising:

   a)   providing:

        i)   a subject comprising a tissue that comprises endothelial cells; and

        ii)   at least one Src inhibitor; and

   b)   treating said endothelial cells with said at least one Src inhibitor such that
   angiogenesis by said endothelial cells is reduced.

24.   A method for increasing cell apoptosis in a subject, comprising:

a)   providing:

      i)   a subject comprising a tissue that comprises cells; and

      ii)   at least one Src inhibitor; and

5   b)   treating said cells with said at least one Src inhibitor such that apoptosis of said cells is increased.